

Washtenaw Community College Comprehensive Report

WAF 123 Advanced Oxy-fuel Welding Effective Term: Winter 2012

Course Cover

Division: Vocational Technologies

Department: Welding and Fabrication

Discipline: Welding and Fabrication

Course Number: 123

Org Number: 14610

Full Course Title: Advanced Oxy-fuel Welding

Transcript Title: Advanced Oxy-fuel Welding

Is Consultation with other department(s) required: No

Publish in the Following: College Catalog , Time Schedule , Web Page

Reason for Submission: Three Year Review / Assessment Report

Change Information:

Course title

Course description

Pre-requisite, co-requisite, or enrollment restrictions

Outcomes/Assessment

Objectives/Evaluation

Rationale: Regular three year review

Proposed Start Semester: Winter 2012

Course Description: This course is designed for the advanced oxy-fuel welding student.

Instruction includes out of position welds on various plate and tubular configurations.

Procedures and welding theories are covered and practiced on ferrous and non-ferrous

materials. Brazing steel and cast iron is also covered. The title of this course was previously

Welding III Advanced Oxy-Acetylene (OAW).

Course Credit Hours

Variable hours: No

Credits: 4

Lecture Hours: Instructor: 30 **Student:** 30

Lab: Instructor: 90 **Student:** 90

Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 120 **Student:** 120

Repeatable for Credit: NO

Grading Methods: Letter Grades

Audit

Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Requisites

Prerequisite

Academic Reading and Writing Levels of 6

and

Prerequisite

WAF 111 minimum grade "C"

General Education
Request Course Transfer
Proposed For:

Student Learning Outcomes

1. Recognize and apply welding vocabulary.

Assessment 1

Assessment Tool: Written exam

Assessment Date: Fall 2012

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Answer key

Standard of success to be used for this assessment: 80% of students will score 90% or higher

Who will score and analyze the data: Departmental faculty

2. Recognize and interpret welding theory.

Assessment 1

Assessment Tool: Written exam

Assessment Date: Fall 2012

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Answer key

Standard of success to be used for this assessment: 80% of students will score 90% or higher

Who will score and analyze the data: Departmental faculty

3. Oxy-fuel weld a butt, lap and tee joint in the vertical and overhead positions.

Assessment 1

Assessment Tool: Welded samples

Assessment Date: Fall 2012

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: The welds will be scored as pass or fail in meeting AWS D1.1 code.

Standard of success to be used for this assessment: 80% of students will create welds in accordance with AWS D1.1 code.

Who will score and analyze the data: Departmental faculty

4. Oxy-fuel weld tube in the horizontal, vertical and angled positions.

Assessment 1

Assessment Tool: Welded samples

Assessment Date: Fall 2012

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: The welds will be scored as pass or fail in meeting AWS D1.1 code.

Standard of success to be used for this assessment: 80% of students will create welds in accordance with AWS D1.1 code.

Who will score and analyze the data: Departmental faculty

Course Objectives

1. Review basic oxy-fuel welding, cutting and shop safety.

Matched Outcomes

2. Demonstrate proper shop safety.

Matched Outcomes

3. Follow shop rules when working in shop setting.

Matched Outcomes

4. Demonstrate control of a puddle working against gravity in the vertical, horizontal, and overhead positions.

Matched Outcomes

5. Demonstrate proper filler metal deposition techniques in the horizontal, vertical and overhead positions.

Matched Outcomes

6. Demonstrate proper heat control with torch and rod manipulation techniques.

Matched Outcomes

7. Weld a butt joint in the horizontal, vertical and overhead positions achieving 100% penetration.

Matched Outcomes

8. Weld a lap joint in the horizontal, vertical and overhead positions.

Matched Outcomes

9. Weld a tee joint in the horizontal, vertical and overhead positions.

Matched Outcomes

10. Weld 3" OD steel tubing in the horizontal, 2G, position.

Matched Outcomes

11. Weld 3" OD steel tubing in the vertical, 5G, position.

Matched Outcomes

12. Weld 3" OD steel tubing in the angled, 6G, position.

Matched Outcomes

13. Braze a butt, lap and tee joint in the horizontal, vertical and overhead positions.

Matched Outcomes

14. Braze an outside corner joint on cast iron in horizontal, vertical and overhead positions.

Matched Outcomes

15. Weld a flat position butt joint on aluminum with 100% penetration.

Matched Outcomes

16. Weld a flat position lap joint on aluminum.

Matched Outcomes

17. Weld a flat position tee joint on aluminum.

Matched Outcomes

18. Weld an edge joint in the horizontal, vertical and overhead positions.

Matched Outcomes

19. Weld a corner joint in the horizontal, vertical and overhead positions.

Matched Outcomes

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Level III classroom

Reviewer

Action

Date

Faculty Preparer:

Amanda Scheffler

Faculty Preparer

Aug 08, 2011

Department Chair/Area Director:

Glenn Kay II

Recommend Approval

Oct 05, 2011

Dean:

Ross Gordon

Recommend Approval

Oct 18, 2011

Vice President for Instruction:

Stuart Blacklaw

Approve

Nov 15, 2011